Conservation Reserve Program
Forb and Legume Inter-seeding For Wildlife

2/07

Natural Resources Conservation Service (NRCS) - Minnesota

Participant _____ **Date** _____

PURPOSE:
Native forb, native legume and non-native legume inter-seeding is used to increase plant diversity in native and introduced grass plantings or in old field habitats. Inter-seeding provides wildlife with a food source during the winter. It can also create excellent brood habitat for upland wildlife during the summer. ***This practice will be used after a disturbance such as prescribed burning, light disking or herbicide spraying.***

PLANNING CONSIDERATIONS:

1. Do not inter-seed with birdsfoot trefoil, crown vetch or sweet clover.
2. For fields >20 acres in size, no more than 1/2 of a field should be disturbed at any given management period. Fields < 20 acres in size may be managed in their entirety.
3. Consider critical areas within the offer (ie. steep slopes, fragile soils etc) for maintaining existing cover and reduce erosion hazard.
4. Consider the effects of the practice on at risk species, including state and Federally listed species.

SITE PREPARATION AND SEEDING:

<u>Establishing Introduced Legumes Into Existing Introduced Cool Season Grasses:</u>

- Option 1: After August 1st, mow or use other methods of chopping existing vegetation. Lightly disk in September to smooth mounds and enhance residue breakdown. The following spring; apply needed lime and fertilizer. Harrow as needed to develop a firm and smooth seedbed. Drill legume mixture at specified rates. Broadcast seeding may be applicable provided enough soil disturbance is accomplished to provide good soil-seed contact. The broadcast seeding rate will be 1.5 times drilled rate. All broadcast-seeding operations require rolling, harrowing or cultipacking immediately after seeding.
- Option 2: After August 1st, mow or use other methods of chopping existing vegetation. Lightly disk in September to smooth mounds and enhance residue breakdown. The following spring; apply needed lime and fertilizer. No-till drill legume mixture at specified rates.

<u>Establishing Native Forbs and Legumes Into Existing Native Grass Stands:</u>

- Option 1: Use a fall prescribed burn after vegetation is dead and dry. Back burn to obtain the most complete residue removal. Lightly disk to smooth mounds or rough areas as necessary. No-till drill forbs/legumes directly into seedbed after Nov. 1st or when assured that soil temperature will remain below 50º F.
- Option 2: Use an early spring prescribed burn to remove previous year's residues. Back burn to obtain the most complete residue removal. Lightly disk to smooth mounds or rough areas as necessary. No-till drill forbs/legumes directly into seedbed. In limited cases, it may be necessary to use a reduced rate of burn down herbicide to suppress competition from established grass before forbs/legumes emerge. Follow manufactures label directions. *CAUTION: producer may risk complete loss of stand, even at reduced herbicide rates.*
- Option 3: Manage previous year's residue with rotary mowing or use other methods of chopping existing cover in October. Lightly disk to smooth mounds or rough areas. No-till drill native forbs/legumes in the spring into existing residues. In limited cases, it may be necessary to use a reduced rate of burn down herbicide to suppress competition from established grass before forbs/legumes emerge. Follow manufactures label directions. *CAUTION: producer may risk complete loss of stand, even at reduced herbicide rates.*

SEEDING DATES:

Introduced legumes:

	Spring	Late Summer	Dormant
North	April 1 – June 15	July 15 – Sept. 1	Nov. 1- Freeze
South	April 1 – June 1	August 1 – Sept. 10	Nov. 1- Freeze

Native forbs and legumes:

	Spring*	Late Summer	Dormant
Statewide	May 15 to June 30	Not Recommended	Nov. 1 – Freeze

*Seeding of warm season forbs/legumes may begin before May 15th if the soil temp. is 50 degrees F.

SEED SELECTION:

- Select combinations of plants species best adapted to site conditions, this will provide greater diversity within the field and improve chances of seeding establishment across varying soil conditions.
- Recommended species and seeding rates. Rates provided are for pure live seed per acre drilled to a ¼ inch depth. Broadcast seeding of introduced legumes may be applicable on lightly disked introduced grass sites, rates will be 1.5 times drilled rate.
- Legume seed of introduced species shall be inoculated in accordance with the directions on the innoculant container. Use the correct innoculant for each legume.
- Acceptable varieties of introduced grasses and legumes shall be selected from those listed in the most current University of Minnesota Varietal Trials publication. To insure longer life, alfalfa varieties shall have a Winter Survival Index of less than three, listed in the Very Good Winter Survival category.

INTRODUCED LEGUMES

General Mix	Lb/ac	Low pH Mix	Lb/ac	Wet Sites	Lb/ac
Red Clover	1.5	Alsike Clover	0.5	White Clover (Ladino)	1.0
Alfalfa	2.0	White Clover	1.0	Alsike Clover	1.0
White Clover (Ladino)	1.0	Red Clover	2.0	Red Clover	1.0

NATIVE FORBS AND LEGUMES

SPECIES	SITE ADAPTABILITY	RATE PLS oz/ac	COMPOSITION*
Purple Prairie Clover *(Dalea purpurea)*	Dry - Wet	2.0	• Interseed native forbs and legumes at a total rate of 8 to 16 PLS oz/acre. • Seed a minimum of 4 species.
Big Flowered Penstemon *(Penstemon grandifloris)*	Dry - Mesic	2.0	
Showy Partridge Pea *(Chamecrista fasticulata)*	Dry – Mesic Annual	2.0	
Maximillian Sunflower *(Helianthus maximiliani)*	Dry - Wet	2.0	
Black Eyed Susan *(Rudbeckia hirta)*	Dry - Wet	2.0	
Canada Milkvetch *(Astragalus canadensis)*	Dry - Mesic	2.0	
Illinois Bundle Flower *(Demanthus illinoensis)*	Dry - Mesic	2.0	

***** Listed native forbs and native legumes are but a few of the many different species that may be appropriate for a given site. As a general rule, the greater the diversity of forbs/legumes results in higher quality habitat. Consult NRCS staff for further recommendations.

OPERATION AND MAINTENANCE:

- Reapply this practice periodically to set back succession and restore the desired habitat conditions.
- Monitor wildlife use to determine practice success and to better prescribe future management.
- Control noxious and other undesirable plant species as needed.